

HeartChart integrated user interface for patient data and records

HeartChart is a patient-centric medical records application that integrates patient demographic and clinical information from a database application with medical record documents from the Hummingbird DM patient records management system in a practitioner-friendly, medical chart-like user interface.

HeartChart provides doctors and clinical staff with a view that is organized according to their accustomed way of working – from the patient's physical chart.

HeartChart is also integrated with an Adobe electronic forms application, allowing clinical staff to create new electronic progress notes for a patient from the same interface.

HeartChart - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Search Patient Data All Records Selected Records

Progress Notes H&P/Consults Discharge Meds/Req. Slips Arrhythmia/Device

Labs CV Lab Echo GXT ECG/Holter Rad/Other Dx Research Ins./AD/Auth

Welcome to St. Paul HeartChart

Find Patient

Acct:

Last:

First:

DOB:

Date range search

Start:

End:

Search Clear

Help

No Patient Currently Selected

Recent patients

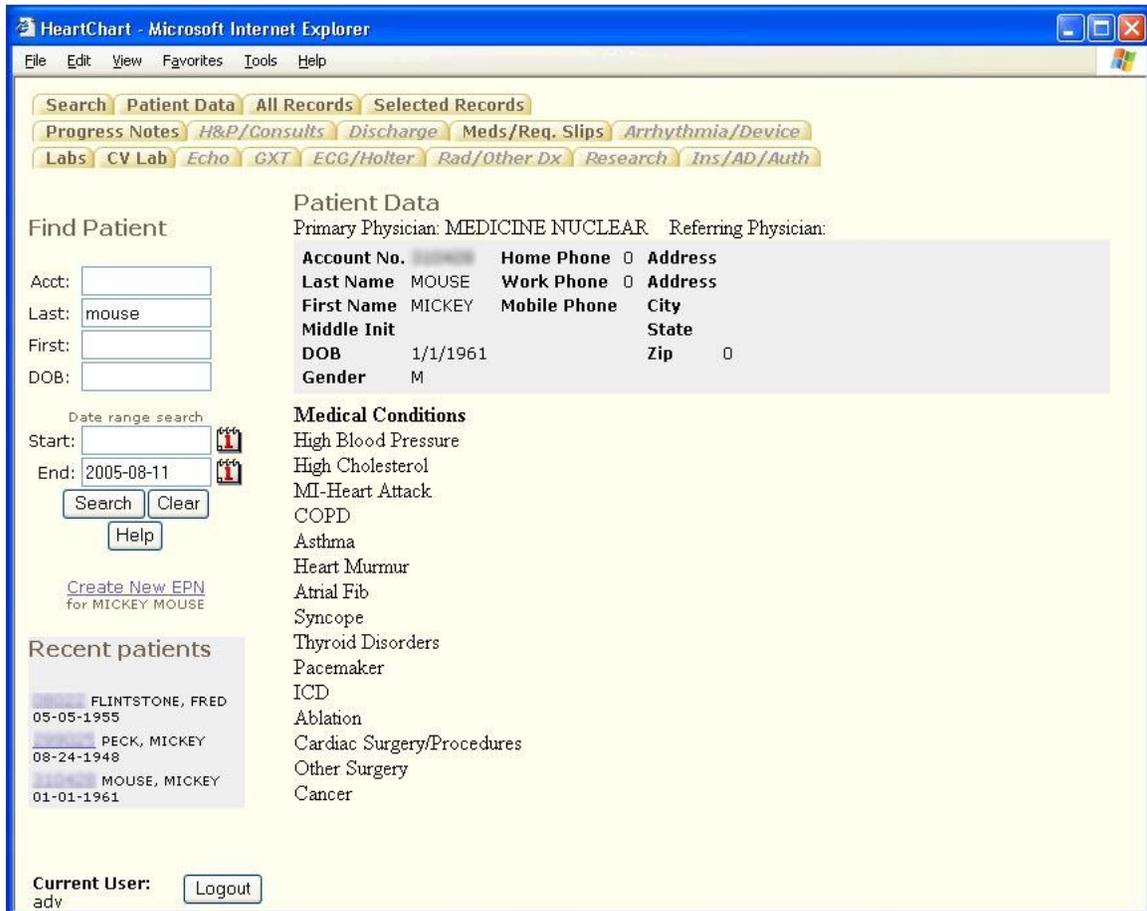
- FLINTSTONE, FRED
05-05-1955
- PECK, MICKEY
08-24-1948
- MOUSE, MICKEY
01-01-1961

Current User: Logout

1. Searching for patient information

The initial view allows searching for patients in the clinical database by a variety of criteria. A list of recently accessed patients is maintained for each user for quick reference.

Because HeartChart communicates with the DM system via the API, all security and activity logging functions are maintained, even though the standard DM clients are bypassed. The patient account number from the clinical database provides the link to documents in the DM system.



2. Patient data from clinical database.

Document types in the DM system are assigned to tabs in the HeartChart interface. Mapping of document types to tabs is configurable, so that new types can be accommodated easily without code changes. For user convenience, tabs that do not contain any documents are disabled.

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Labs CV Lab Echo CXT ECG/Holter Rad/Other Dx Research Ins/AD/Auth

MOUSE, MICKEY
 Acct. No: [REDACTED]
 DOB: 1/1/1961
 Searched: All Dates

Check/Uncheck All
 03-11-2004 INR CAAMLIE

MickeyID	DOB	AddressLine1	HomePhone				
Last Name	AddressLine2	WorkPhone	MobilePhone				
FirstName	City	State	ZipCode				
MiddleInitial	State	ZipCode	Pharmacy				
DOB	Gender	Target	Target				
Admitte	Dx	PR	Tablet				
Dose	Sched	Loc	Education				
Provided	Notes	NextVisit					
2.5	3	3/5/99 Aflatus	5	65 7.5mg MWF	DT		
3/11/2004	2.2	65	7.5 mg MWF & 10	No changes		4/8/2004	
2/12/2004	1.9	62.5	10mg SuTuTh &	No changes Plan; return to previous		3/1/2004	
1/12/2004	3.5	65	7.5mg MWF &	dose of 10mg 4/7 & 7.5mg MWF w inr		2/9/2004	
12/18/2003	2.5	65	7.5 MG MWF & 10	No changes Continue to take Celebrex.		1/15/2004	
11/20/2003	2.1	65	7.5mg MWF & 10	Has decided to lose wt. Plan; 10mg 5/7 &		12/18/2003	
10/22/2003	2.4	65	7.5 mg MWF & 10	7.5mg MWFSA w inr 4wks		11/21/2003	
9/24/2003	2.9	65	10 mg 5/7 & 7.5 mg	MISSED DOSE 12/14. No other changes		10/24/2003	
9/11/2003	2	62.5	10mg 4/7 & 7.5mg	Plan, same coumadin and inr 4wks unless changes		10/1/2003	

Current User: adv Logout

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3. Record displayed in viewer window.

When a tab is selected, all documents of the corresponding type(s) are listed in the left frame, sorted by date of service. Clicking a link displays the document (in PDF form) in the right frame. In any tab, documents can be selected via a checkbox for inclusion in an assembled PDF chart document.

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File Edit View Favorites Tools Help

Search Patient Data All Records Selected Records

Progress Notes H&P/Consults Discharge Meds/Req. Slips Arrhythmia/Device

Labs CV Lab Echo GXT ECG/Holter Rad/Other Dx Research Ins/AD/Auth

MOUSE, MICKEY
 Acct. No: [REDACTED]
 DOB: 1/1/1961
 Searched: All Dates

Check/Uncheck All

08-09-2005 EPN FUSION
 08-08-2005 EPN FUSION
 08-08-2005 EPN FUSION
 08-08-2005 EPN FUSION
 08-08-2005 EPN FUSION
 08-05-2005 EPN LCARLS
 08-05-2005 EPN LCARLS
 08-04-2005 EPN FUSION
 08-04-2005 EPN FUSION
 08-04-2005 EPN FUSION
 08-04-2005 EPN FUSION
 08-02-2005 EPN ASNYDE
 08-02-2005 EPN MTURN
 08-02-2005 EPN SVOLD
 08-01-2005 EPN BSTEJSK
 07-27-2005 EPN ADV Edi
 07-26-2005 EPN ADV E
 06-07-2005 PN SPHC
 06-05-2005 PN FUSIONA

Current User: adv Logout

ADDENDUM EXISTS

St. Paul Heart Clinic Progress Note

Name: MOUSE MICKEY
 MR #: [REDACTED]
 Birthday: 1/1/1961
 Primary Card: MEDICINE NUCLEAR
 Primary MD:
 Primary EP:
 Pt.'s Phone #: 000000000
 Alt. Phone #:

Date: 07/26/2005
 DOS: 07/26/2005

Type of Encounter: Phone Call Office Visit No Show Cancel Other _____

Reason for Encounter: Provider Visit Lab Medication
 Education Procedure Research
 Diagnostic Test

Plan/Action: Other This is a test

Test ordered By whom?
 To be seen by SPHC ER PMD
 Provider notified
 Education per protocol
 Results forwarded to NC NP MD
 Advice/follow-up provided
 Route to DSC via req slip
 Pt. to call back with questions and concerns
 Explained risks and benefits per SPHC protocol. Pt. scheduled at _____ on _____
 Pt. verbalizes understanding of procedure and risks and agrees to proceed
 Pt. verbalizes understanding of treatment plan and agrees to proceed
 Refill Medication ordered - see medication communication record
 Medication instructions

1 of 1

4. E-form progress notes list with selected documents.

The electronic forms integration speeds entry of patient progress notes and reduces error by copying needed information from the clinical database to the form.

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Labs CV Lab Echo CXT ECG/Holter Rad/Other Dx Research Ins/AD/Auth

MOUSE, MICKEY
 Acct. No: [REDACTED]
 DOB: 1/1/1961
 Searched: All Dates

Print | Email | Copy

Selected Records

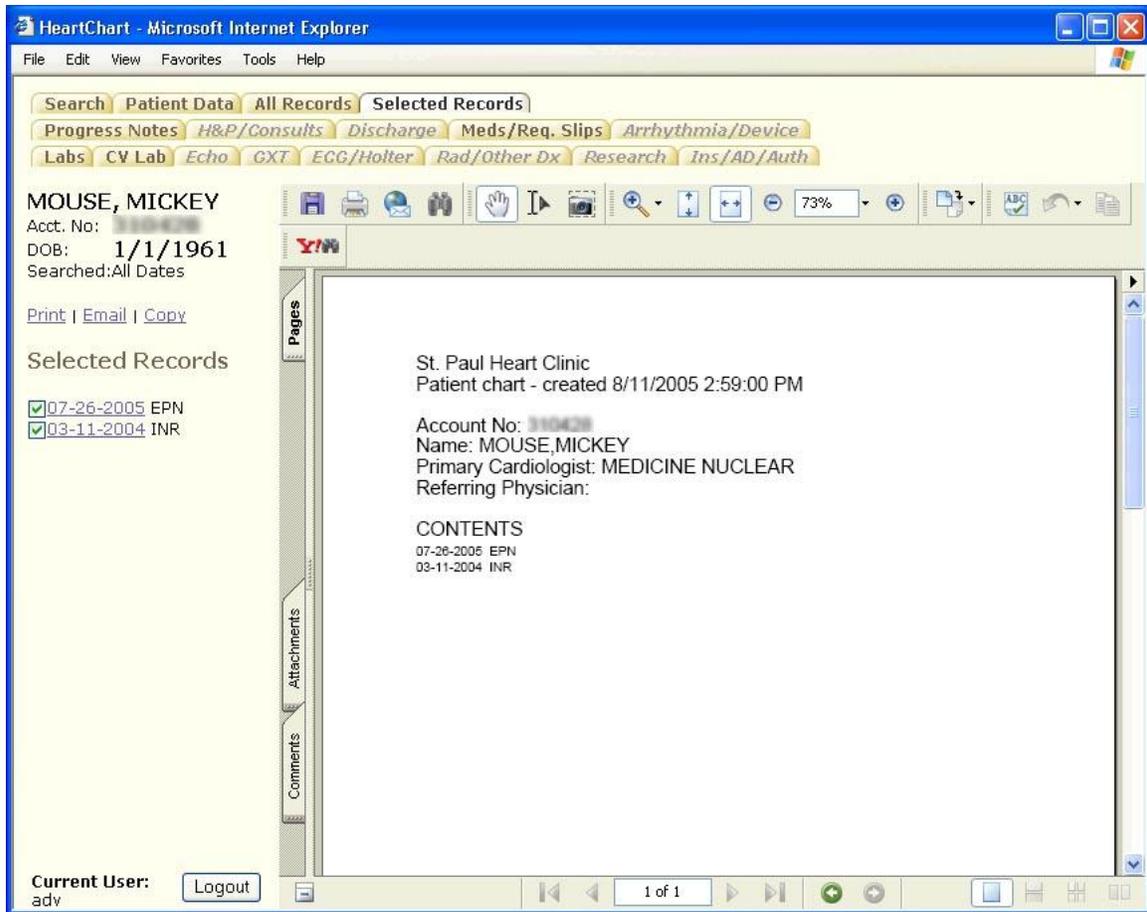
07-26-2005 EPN
 03-11-2004 INR

MiscID	Issue	AddressLine1	HomePhone			
LastName	AddressLine2	WorkPhone	MobilePhone			
FirstName	City	State	ZipCode			
MiddleInitial	State	Pharmacy				
DOB	Gender	Target	Target			
Admitte	Dx	PR	Tablet			
Dose	Schedule	Notes	NextVisit			
2.5	3	3/5/99 Aflatus	5	65 7.5mg MWF DT		
3/11/2004	2.2	65	7.5 mg MWF & 10	No changes		4/8/2004
2/12/2004	1.9	62.5	10mg 2xTuTh &	No changes Plan; return to previous dose of 10mg 4/7 & 7.5mg MWF w inr		3/11/2004
1/12/2004	3.5	65	7.5mg MWF &	No changes Continue to take Celebrex. Has decided to lose wt. Plan; 10mg 3/7 & 7.5mg MWFSA w inr 4wks		2/9/2004
12/18/2003	2.5	65	7.5 MG MWF & 10	MISSED DOSE 12/14 No other changes. Plan; same coumadin and inr 4wks unless changes		1/15/2004
11/20/2003	2.1	65	7.5mg MWF & 10	No changes. Plan; no green for 3 day; same coumadin and inr 4wks		12/18/2003
10/22/2003	2.4	65	7.5 mg MWF & 10	No changes since last INR. Plan; same coumadin and INR 4wks		11/21/2003
9/24/2003	2.9	65	10 mg 5/7 & 7.5 mg	Came in because cut self while shaving and it took 20 min to stop. Anxious about INR being 2.9. Plan; Warfarin 7.5mg MWF & 10mg 4/7. INR 2wks		10/24/2003
9/11/2003	2	62.5	10mg 4/7 & 7.5mg	Missed a dose sometime last week. On low end twice now so will increase to 10mg 5/7 & 7.5mg 2xW. INR 4wks		10/11/2003

Current User: adv Logout

5. The Selected Records tab shows checked records that can be combined into a customized chart for printing, e-mailing, or copying to a tablet PC.

Selected records can be assembled into a customized chart with just the required information. A contents page and bookmarks in the merged PDF document are created automatically.



6. The assembled chart has now been created and unlocked for printing, e-mailing or copying.

PDF's are used extensively to ensure a high degree of security, including print control and logging.

Technologies used within this application include: Hummingbird DM, Kofax Ascent, Adobe Acrobat, various web development technologies, Microsoft SQL Server, the patient demographics database, and 3rd party controls for PDF rendering and construction.